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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,061	12/18/2001	Ira Cohen	10006656	8586

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO   80527-2400

EXAMINER
BARQADLE, YASIN M

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/026,061	COHEN ET AL.
	Examiner	Art Unit	
	Yasin M. Barqadle	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 November 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

Applicant's arguments filed on November 15, 2005 have been
considered but are not deemed persuasive.

Claims 1-10 are presented for examination.

Response to Arguments

Applicant argues that Thiesson teaches "selecting a decision graph
(parameters) for a Bayesian network using data summarizing real-world
cases (observation data) (Thiesson, col. 29, lines 35-47) without
regard to a relative weight of past and present real-world cases" page
5, second paragraph. Examiner notes that Thiesson uses a continuous
learning process where during the learning process the decision graphs
are scored to determine goodness at reflecting the data, an a number
of candidate decision graphs are generated for each one by making
adjustments. Bayesian network is scored (weights) for how well all
decisions graphs reflect the data, and the Bayesian network is then
updated to improve its score. Col. 29, lines 30-55). Furthermore,
Thiesson teaches, " MBN generator 502 of the exemplary embodiment
contains a scoring mechanism 602 and a network adjuster 606. The
scoring mechanism 602 receives the expert knowledge 506, the empirical
data 504, the test network 608 and a list of nodes 610 as input. After
receiving this information, the scoring mechanism 608 generates a

score 604 that ranks the nodes of test network 608 as indicated by the list of nodes 610 for goodness ... In the exemplary embodiment, a Bayesian network (i.e., the initial network or the test network 608) is stored in memory as a tree data structure where each node in the tree data structure corresponds to a node in the Bayesian network. ... The network adjuster 606 receives as input the score 604 and the initial network and generates a new test network 608 in response thereto, which is then passed back to the scoring mechanism 602 with a list of nodes 610 which need to be rescored. After iterating many times between the scoring mechanism 602 and the network adjuster 606, the network adjuster eventually generates an improved MBN 508 (hereinafter referred to as a Bayesian network col. 21, lines 27-65 and col. 22, lines 56 to col. 23, line 30). Therefore, Thiesson clearly considers past and present observations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American
Inventors Protection Act of 1999 (AIPA) and the Intellectual
Property and High Technology Technical Amendments Act of 2002 do
not apply when the reference is a U.S. patent resulting directly
or indirectly from an international application filed before
November 29, 2000. Therefore, the prior art date of the
reference is determined under 35 U.S.C. 102(e) prior to the
amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being
anticipated by Thiesson et al US. Patent No. (6807537).

As per claim 1, Thiesson et al teach a method for adapting a
Bayesian network (abstract), comprising the steps of:

determining a learning rate that indicates a relative
weight of a set of past observation data and a set of present
observation data; (The MBN generator 502 of the exemplary
embodiment contains a scoring mechanism 602 and a network
adjuster 606. The scoring mechanism 602 receives the expert
knowledge 506, the empirical data 504, the test network 608 and
a list of nodes 610 as input. After receiving this information,
the scoring mechanism 608 generates a score 604 that ranks the
nodes of test network 608 as indicated by the list of nodes 610
for goodness ... In the exemplary embodiment, a Bayesian network
(i.e., the initial network or the test network 608) is stored in

memory as a tree data structure where each node in the tree data

structure corresponds to a node in the Bayesian network. ... The

network adjuster 606 receives as input the score 604 and the

initial network and generates a new test network 608 in response

thereto, which is then passed back to the scoring mechanism 602

with a list of nodes 610 which need to be rescored. After

iterating many times between the scoring mechanism 602 and the

network adjuster 606, the network adjuster eventually generates

an improved MBN 508 (hereinafter referred to as a Bayesian

network col. 21, lines 27-65 and col. 22, lines 56 to col. 23,

line 30);

updating a set of parameters of the Bayesian network in

response the present observation data according to the learning

rate (the Bayesian network is scored for how well all decision

graphs reflect the data, and the Bayesian network is then

updated to improve its score col. 29, lines 36-55 and col. 32,

lines 43-67. see fig. 26A and col. 21, lines 27-65)

As per claim 2, Thiesson et al teach the method of claim 1,

wherein determining a learning rate comprises:

determining an initial value for the learning rate (col.

21, lines 27-65 and col. 29, 36 to col. 30, line 21);

determining an estimate of the parameters in response

to the present observation data (col. 21, lines 27-65 and col.
29, lines 36 to col. 30, line 21);

increasing the adaptive learning rate if an error between
the estimate and a mean value of the parameters is relatively
large (col. 15, line 55 to col. 16, line 67 and col. 20, lines
66 to col. 21, line 55) .

As per claim 3, Thiesson et al teach the method of claim 1,
wherein determining a learning rate comprises:

determining an initial value for the adaptive learning rate
(col. 29, lines 36-55);

determining an estimate of the parameters in response
to the present observation data (col. 21, lines 27-65 and col.
29, 36 to col. 30, line 21and col. 32, lines 43-67);

decreasing the learning rate when convergence is reached
between the estimate and a mean value of the parameters (col.
15, line 55 to col. 16, line 67 and col. 20, lines 66 to col.
21, line 55).

As per claim 4, Thiesson et al teach the method of claim 1,
further comprising obtaining the present observation data from
an on-line environment (fig. 28; col. 21, lines 27-65 and col.

29, lines 36 to col. 30, line 21 and col. 30, lines 64 to col.
31, line 14).

As per claim 5, Thiesson et al teach the method of claim 1,
wherein the step of obtaining comprises the step of obtaining a
subset of values in the observation data from an on-line
environment.

As per claim 6, Thiesson et al teach a system, comprising:

on-line environment that generates a set of present
observation data (fig. 28' col. 21, lines 27-65 and col. 29, 36
to col. 30, line 21);

Bayesian network that performs automated reasoning for the
on-line environment in response to the present observation data
(col. 21, lines 27-65 and col. 29, 36 to col. 30, line 21);

on-line adapter that adapts a set of parameters for the
Bayesian network in response to the present observation data
according to a learning rate that indicates a relative weigh of
a set of past observation data and the present observation data
(col. 30, lines 64 to col. 31, line 14).

As per claim 7, Thiesson et al teach the system of claim 6,
wherein the on-line adapter adapts the parameters by determining

an initial set of the parameters and then updating the

parameters in response to the present observation data using

learning rate (col. 12, lines 14-61 and col. 29, lines 36-67).

As per claim 8, Thiesson et al teach the system of claim 7,

wherein the on-line adapter updates the parameters by

determining an initial value for the learning rate and

determining an estimate of the parameters in response to the

present observation data and then increasing the learning rate

if an error between the estimate and a mean value of the

parameters is relatively large (fig. 26A col. 15, line 55 to

col. 16, line 67 and col. 20, lines 66 to col. 21, line 55)

As per claim 9, Thiesson et al teach the system of claim 7,

wherein the on-line adapter updates the parameters by

determining an initial value for the learning rate and

determining an estimate of the parameters in response to the

present observation data and then decreasing the learning rate

when convergence is reached between the estimate and a mean

value of the parameters (col. 15, line 55 to col. 16, line 67

and col. 20, lines 66 to col. 21, line 55).

As per claim 10, Thiesson et al teach the system of claim 6,

wherein the on-line adapter obtains a subset of values in the
present observation data from an on-line environment (fig. 28;
(col. 21, lines 27-65 and col. 29, lines 36 to col. 30, line 21
and col. 30, lines 64 to col. 31, line 14).

Conclusion

1.   **ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is
reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action
is set to expire **THREE MONTHS** from the mailing date of this
action. In the event a first reply is filed within **TWO MONTHS**
of the mailing date of this final action and the advisory action
is not mailed until after the end of the **THREE-MONTH** shortened
statutory period, then the shortened statutory period will
expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated
from the mailing date of the advisory action. In no event,
however, will the statutory period for reply expire later than
SIX MONTHS from the date of this final action.

The prior made of record and not relied upon is considered
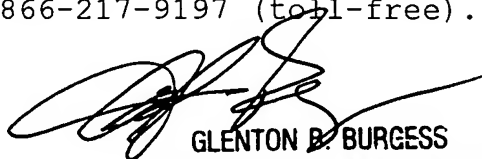pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Art Unit 2153